**IN THE CLAIMS:**

Please amend the Claims as follows:

1. (Currently amended) A radiation imaging system comprising:

a scintillator;

an imager array; and

a lamination layer disposed between said scinillator and said imager array to provide bonding and optical coupling [[;]] , said lamination layer comprising a lamination material ~~substantially free from void spaces~~ , wherein said lamination material is selected from a group consisting of Benzocyclobutene (BCB) thermoset polymers, plasticized polyetherimide thermoplastic polymers having a glass transition temperature ($T_g$) of less than about 180 degrees C (i.e. a blend of said polyetherimide and a pentarythrytol tetrabenzoate), photodefinable BCB thermoset polymers, thermoset polymer epoxies with latent heat catalysts, thermoplastic polyester polymers and thermoplastic acrylic polymers, and

wherein said plasticized polyetherimide thermoplastic polymers further comprise mixtures of polyetherimide and pentarythrytol tetrabenzoate, said mixtures having a range of between about 60% and about 95% by weight of said polyetherimide and a range of between about 5% to about 40% by weight of said pentarythrytol tetrabenzoate.

2. (Original) The radiation imaging system in accordance with Claim 1 wherein:

said lamination layer further comprises at least about 90% of said lamination material.

3. (Currently amended) The radiation imaging system in accordance with Claim [[1]] 15 wherein:

said lamination layer further comprises at least about 95% of said lamination material.

4. (Currently amended) The radiation imaging system in accordance with Claim [[1]] 3 wherein:

said lamination layer further comprises at least about 99% of said lamination material.

5. (Original) The radiation imaging system in accordance with Claim 1 further comprising a hermetic seal disposed to provide ambient moisture protection for said scintillator, said lamination layer and said imager array.

6. (Original) The radiation imaging system in accordance with Claim 1 wherein said scintillator has a scintillator second surface that is substantially optically reflective.

7. (Currently amended) The radiation imaging system in accordance with Claim [[1]] 15 wherein said scintillator has a thickness in a range between about 500 microns and about 25000 microns.

8. (Currently amended) The radiation imaging system in accordance with Claim [[1]] 15 wherein said scintillator has a substantially columnar structure.

9. (Cancelled)

10. (Cancelled)

11. (Original) The radiation imaging system in accordance with Claim 1 wherein said lamination layer has a thickness in a range between about 5 microns and about 25 microns.

12. (Currently amended) ~~The~~ A radiation imaging system ~~in accordance with Claim 1~~ comprising:

a scintillator;

an imager array; and

a lamination layer disposed between said scinillator and said imager array to provide bonding and optical coupling, wherein said lamination layer comprises an optical absorbing material which comprises an anthraquinone-based dye selected from a group consisting of diaminoanthraquinone (DAA) and 1-methylamino-4-dihydroxyanthraquinone (DHA).

13. (Original) The radiation imaging system in accordance with Claim 12 wherein said lamination layer has a thickness in a range between about 5 microns and about 12.5 microns.

14. (Original) The radiation imaging system in accordance with Claim 12 wherein said lamination layer comprises between about 0.5 and about 5 weight percent of said anthraquinone-based dye in said lamination material.

15. (Currently amended) ~~The~~ A radiation imaging system ~~in accordance with Claim 1~~ comprising:

a scintillator;

an imager array; and

a lamination layer disposed between said scinillator and said imager array to provide bonding and optical coupling, wherein said lamination layer comprises an optical absorbing material that is selected from a group consisting of sub-micron carbon powders and azo-based dyes.

16. (Original) The radiation imaging system in accordance with Claim 15 wherein said lamination layer has a thickness in a range between about 5 microns and about 12.5 microns.

17. (Currently amended) The radiation imaging system in accordance with Claim [[1]] 15 wherein said scintillator is a fiber optic type scintillator (FOS).

18. (Currently amended) A radiation imaging system comprising:

a scintillator;

an imager array; and

a lamination layer disposed between said scinillator and said imager array to provide bonding and optical coupling [[;]] , said lamination layer comprising ~~a lamination material substantially free from void spaces;~~

~~wherein said lamination layer further comprises~~ at least about 90% of ~~said~~ a lamination material , wherein said lamination layer has a thickness in a range between about 5 microns and about 25 microns,

wherein said lamination material is selected from a group consisting of Benzocyclobutene (BCB) thermoset polymers, plasticized polyetherimide thermoplastic polymers having a glass transition temperature ($T_g$) of less than about 180 degrees C (i.e. a blend of said polyetherimide and a pentarythrytol tetrabenzoate), photodefinable BCB thermoset polymers, thermoset polymer epoxies with latent heat catalysts, thermoplastic polyester polymers and thermoplastic acrylic polymers, and

wherein said plasticized polyetherimide thermoplastic polymers further comprise mixtures of polyetherimide and pentarythrytol tetrabenzoate, said mixtures having a range of between about 60% and about 95% by weight of said polyetherimide and a range of between about 5% to about 40% by weight of said pentarythrytol tetrabenzoate.

19. (Original) The radiation imaging system in accordance with Claim 18, further comprising a hermetic seal disposed to provide ambient moisture protection for said scintillator, said lamination layer and said imager array.

20-50. (Cancelled)